UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/021,760	10/22/2001	David Guedalia	NMS03-13	2247

7590   12/23/2004

BARRY W. CHAPIN ESQ.
CHAPIN AND HUANG, L.L.C.
1700 WEST PARK DRIVE
WESTBOROUGH OFFIC PARK
WESTBOROUGH, MA 01851

EXAMINER
KNEPPER, DAVID D

ART UNIT	PAPER NUMBER
2654	

DATE MAILED: 12/23/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>27 February 2002</u>.
2a)☐ This action is **FINAL.**   2b)☒ This action is non-final.
3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle,* 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.
    4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5)☐ Claim(s) _____ is/are allowed.
6)☒ Claim(s) *1-20* is/are rejected.
7)☐ Claim(s) _____ is/are objected to.
8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.
10)☒ The drawing(s) filed on <u>22 October 2001</u> is/are: a)☐ accepted or b)☒ objected to by the Examiner.
    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
    a)☐ All b)☐ Some * c)☐ None of:
        1.☐ Certified copies of the priority documents have been received.
        2.☐ Certified copies of the priority documents have been received in Application No. _____.
        3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
            application from the International Bureau (PCT Rule 17.2(a)).
    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date <u>27 Feb 2002</u>.
4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____ .

1.   Applicant's correspondence filed on   27 Feb 2002 (IDS) has been received and
considered. Claims 1-20 are pending.

Information Disclosure Statement (IDS)

2.   All references listed were considered. It is unclear why Lazardis (6,219,694) was cited
since it does not appear to be related to the claimed invention, which is performing text to speech
conversion.

Drawings

3.   The drawings are objected to because they fail to show how text-to-speech conversion is
achieved. Similarly, they fail to show neither how different vocabulary domains are made nor
how they are compared against input text. No illustration of any speech grammar is evident.

        Correction is required.

Priority Claims

4.   The applicant(s) should check their filing receipts and/or the Patent Application
Information Retrieval (PAIR) system for the acknowledgment of their **domestic** priority or
benefit claims (if any) under 35 USC 119(e), 120 or 121 (37 CFR 1.78).

Specification

5.   The disclosure is objected to because of the following informalities:

        The statement regarding the field of the invention on page 1 is misleading because the

claimed invention is limited to text to speech conversion.

Appropriate correction is required.

Claims

6.   Claims 2, 3, 12 and 13 are rejected under 35 U.S.C. § 112, second paragraph, as being

indefinite for failing to particularly point out and distinctly claim the subject matter which

applicant regards as the invention.

The use of a closeness metric is confusing because there is no indication of what this is.

The only mention of this in the specification is in the Summary on page 2.

7.   The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making
> and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it
> pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode
> contemplated by the inventor of carrying out his invention.

8.   Claims 1-20 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with

the enablement requirement. The claim(s) contains subject matter, which was not described in

the specification in such a way as to enable one skilled in the art to which it pertains, or with

which it is most nearly connected, to make and/or use the invention.

The specification does not correspond very well to the claimed invention.   The

specification begins by indicating that the invention provides wireless, voice-activated access to

the Internet but the claims do not reflect this. To the contrary, the claims are directed towards

text to speech synthesis.

However, the specification is also lacking specificity to indicate how any input text is

converted into speech output. Figure 3 seems closest to the claims but contains many items that

are not defined in any detail. The Domain definer 150 (from figure 1 is supposed to provide information about the limited domain servers 340 but no description of the domain nor the limited domains is present that would indicate how they differ from one another nor what sort of limited information they might contain.

The text distributor 320 fails to identify any methodology to plausibly divide text into queues 350. Similarly, the thread pools 370 are not defined. It is unknown what particular information these are supposed to contain nor what they might do with any information sent their way. The TTS clients 370 are similarly undefined and it is unknown what these are nor how they differ from client 300 who would presumably be the user of the system.

In short, the boxes of figure 3 (for example) are not defined in function any by the data that is supposed to flow between them.

What elements disclosed contain phonetic elements such as phonemes, words, sentences, waveforms and combinations of data necessary to achieve text to speech conversion? What elements, if any, contain look-up tables of stored text that might be used to gain access to phonetic elements necessary to create speech sounds? What series of rules are used to convert text or portions thereof to audio? Is the text-to-speech conversion based on parametric rules, concatenation of stored elements or is it a more complicated combination of waveforms? No description of any necessary elements, rules and parameters needed for text to speech conversion could be found.

Claim 6 appears to be an attempt to create speech recognition grammar by analyzing text that is being converted to speech. No grammar is disclosed nor is any manner for analyzing text to create a grammar. To the contrary, the specification does not mention speech recognition and

it's requisite elements nor are any such elements shown in the drawings.

9.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or
>
> described as set forth in section 102 of this title, if the differences between the subject
>
> matter sought to be patented and the prior art are such that the subject matter as a whole
>
> would have been obvious at the time the invention was made to a person having ordinary
>
> skill in the art to which said subject matter pertains. Patentability shall not be negatived
>
> by the manner in which the invention was made.

10.   Claims 1-20 are rejected under 35 U.S.C. § 103 as being unpatentable over Saylor

(6,707,889) in view of Oh (6,141,642).

As per claim 1, "text to speech" is taught or suggested by Saylor's XML based voice

content interpreter 66, content provider web interface 65 of figure 3 and his text to speech 37 of

figure 7:

> "analyzing a text to define at least one vocabulary domain" (suggested by his TTS
>
> (text to speech) processing...determines the voice content that is desired in order to use the
>
> appropriate TTS engine col. 29, lines 22-33); and

> "carrying out a text-to-speech conversion" (his TTS (text-to-speech) processing
>
> col. 29, line 23 – see also Oh, abstract).

It is noted that Saylor does not explicitly teach "vocabulary domain". However, he

teaches that it is known to analyze text to find an appropriate TTS engine. Oh teaches that it is

obvious to have multiple TTS engines for different languages (figure 2, column 4) and to analyze input text to determine which language TTS engine should be used. It would have been obvious for a person having ordinary skill in the pertinent art, at the time the invention was made, to combine Oh with Saylor because Oh provides an example, using languages, of why it was obvious to analyze the text to determine how to select between multiple TTS engines.

Claims 2, 3: It is inherent that some form of metric must be computed in order to determine how to decide between 2 or more TTS engines by analyzing the content of the text input.

Claim 4: A "telephone link" is taught by his communications network, fig. 3 and column 8, line 66 where he calls with a wireless phone.

Claim 5: Text published on a "web site" is taught with his access to the Internet using a URL, etc (col. 14, lines 55-60).

Claim 6: Using "text" for "generating speech recognition grammar" is taught in column 18 with his Nuance Grammar...or a Java Speech grammar, lines 62-67.

Claim 7: Comparing "domains" is taught as noted above regarding different TTS engines such as those that represent different languages.

Claim 8: At least one of "HDMTL, HTML and WML ... to at least one of VXML, and VoiceXML" is taught with his taking an existing HTML page...then convert it to VoiceXML, col. 23, lines 65-67.

Claim 9: See claim 1 above which explains the use of "multiple text-to-speech converters" including in the context of multiple languages.

Claims 10-20 are rejected under similar arguments as noted for claims 1-9 above.

Prior Art

11.   The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Alcendor is cited to show that it is known to use multiple TTS servers.

Garber is cited to show that it is known to divide TTS using multiple topics based on keywords or phrases (fig. 2).

Cooper is cited to show that it is known to provide speech recognition as well as TTS over the Internet to achieve a comprehensive interactive voice response (IVR) system.

Lin is cited to show that TTS can be implemented by dividing the rule set into three portions (fig. 3).

12.   **Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks
Washington, D.C. 20231

or faxed to:

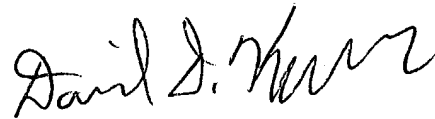TC2600 Fax Center
(703) 872-9314

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington. VA., Sixth Floor (Receptionist).

13.   Any inquiry concerning this communication or earlier communications from the examiner should be directed to David D. Knepper whose telephone number is (703) 305-9644. The examiner can normally be reached on Monday-Thursday from 07:30 a.m.-6:00 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richemond Dorvil, can be reached on (703) 305-9645.

Any inquiry of a general nature or relating to the status of this application should be directed to customer service whose telephone number is (703) 306-0377.

David D. Knepper
Primary Examiner
Art Unit 2654
December 16, 2004